Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band	GN Docket No. 18-122

COMMENTS OF EUTELSAT S.A.

Eutelsat S.A. ("Eutelsat") hereby provides comments on the Public Notice and Cost Category Schedule in the above-captioned proceeding (the "*Notice*" and "*Cost Catalog*").[1] For the reasons discussed below, Eutelsat respectfully submits that the Federal Communications Commission ("FCC" or "Commission") should limit reimbursement of relocation costs only to equipment that is necessary to facilitate the transition, should adequately incentivize rapid transition of earth stations, and should give clear and prompt guidance as to the eligibility and allocation criteria that will apply to reimbursements.

I. DISCUSSION

A. Space Station Reimbursement Eligibility Should Be Limited to In-Orbit Delivery of Comparable Facilities Providing C-band Capacity over CONUS

Because expectations regarding future relocation costs will directly impact the proceeds of the upcoming auction of this spectrum, the Commission should narrowly limit the range of eligible costs to those truly "necessary" to relocate incumbent services to comparable facilities. Relocation cost reimbursement for new satellites, in particular, should be restricted to comparable facilities consistent with the Commission's recent *C-band Order*, its *Emerging Technologies* framework, and the *Teledesic* decision. Those precedents do not permit incumbents to abuse relocation funding by cross-subsidizing a new fleet of hybrid, multi-band

[1] Public Notice, GN Docket No. 18-122, "Wireless Telecommunications Bureau Seeks Comment on Preliminary Cost Category Schedule for 3.7-4.2 GHz Band Relocation Expenses," DA 20-457 (rel. Apr. 27, 2020) ("*Notice*"); *id.* at Attachment, "3.7 GHz Transition Preliminary Cost Category Schedule of Potential Expenses and Estimated Costs" ("*Cost Catalog*").

satellites with vast coverage outside CONUS in the guise of facilitating continuity of C-band services within CONUS. Rather, those precedents support narrowly construing space station reimbursement to prevent unwarranted increases in transition costs, concomitant reduction of auction proceeds, destabilization of the domestic and international marketplace, and the attendant substantial harm to satellite competition.[2]

1. The Commission's *C-band Order, Emerging Markets* framework, and *Teledesic* precedent limit relocation compensation to C-band satellites used for CONUS coverage during their useful life

In the *C-band Order*, the Commission adopted a narrow relocation approach, consistent with the *Emerging Technologies* framework and *Teledesic* precedent, that makes incumbents eligible for reasonable relocation costs, defined as those "necessitated by the relocation in order to ensure that incumbent space station operators continue to be able to provide substantially the same or better [C-band] service to incumbent earth station operators."[3] The Commission was clear, however, that satellite operators may not "attempt to gold-plate their systems" and "will not receive more reimbursement than necessary."[4] Indeed, the Commission has sought to ensure that incumbents do not "view the relocation process as a business opportunity."[5] The Wireless Telecommunications Bureau ("Bureau") must not stray from these rigorous standards in finalizing the *Cost Catalog* and associated cost reimbursement methodologies.

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[2] News reports indicate that satellite operators are already entering into contracts for new satellites associated with the transition, making guidance on the extent to which those satellites are eligible for reimbursement urgently needed. *See* Chris Forrester, "Maxar 'multiple C-band' satellite order," ADVANCED TELEVISION (May 13, 2020), *available at:* https://advanced-television.com/2020/05/13/maxar-multiple-c-band-satellite-order.

[3] *Id.* at ¶ 194; *see* Letter from Carlos M. Nalda, LMI Advisors, for Eutelsat S.A., GN Docket No. 18-122 (filed Jan. 27, 2020) ("*Legal White Paper*") (discussing the Commission's *Emerging Technologies* framework).

[4] *C-band Order* at ¶ 195.

[5] *See, e.g.*, Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8825, ¶ 43 (1996) ("*Microwave Relocation Order*").

The rules adopted in the *C-band Order* are explicit that satellite operators "may receive reimbursement for relocation costs incurred as a result of the transition of FSS operations *to the 4000-4200 MHz band*."[6] Because incumbents' existing satellites can still be used to provide service outside CONUS, they are being deprived only of capacity to provide service in the 3700-4000 MHz band within CONUS. To be potentially eligible for reimbursement, therefore, a new satellite should expand CONUS capacity solely in the 4000-4200 MHz band (and associated C-band uplink frequencies).[7]

The *C-band Order* only permits satellite operators to seek reimbursement for deploying new equipment to replace their existing capabilities if those facilities are necessary to relocate CONUS customers from the 3700-4000 MHz band to the 4000-4200 MHz band:

> We expect incumbents to obtain the equipment that *most closely replaces their existing equipment* or, as needed, provides the targeted technology upgrades necessary for clearing the lower 300 megahertz, and all relocation costs must be reasonable. … [W]e do not anticipate allowing reimbursement for equipment upgrades beyond what is necessary to clear the band. For example, if an incumbent builds additional functionalities into replacement equipment that are not needed to facilitate the swift transition of the band, it must reasonably allocate the incremental costs of such additional functionalities to itself and only seek reimbursement for the costs reasonably allocated to the needed relocation.[8]

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[6] 47 C.F.R. § 27.1411(b)(2) (emphasis added); *see also C-band Order* at ¶ 201, n.539 ("We disagree with ACA Connects that compensable earth station migration costs should include the costs of transitioning to an alternative form of delivery, such as fiber, as long as it is not more expensive that C-band delivery by 'an order of magnitude.' . . . We have defined clearly the migration in this context as the costs of transitioning C-band services to the upper 200 megahertz of the band (e.g., reporting, retuning, and replacing antennas, and installing filters and compression hardware)").

[7] The Commission has stated that "parties seek[ing] cost reimbursement … for relocation costs outside of the contiguous United States, [] must demonstrate that they were required to make the system modifications for which they seek reimbursement as a direct result of the transition in the contiguous United States to make spectrum available for flexible use." *See C-band Order* at ¶ 204. Although this principle was discussed in the context of earth station relocation, it applies equally to satellite relocation.

[8] *C-band Order* at ¶ 194.

Even when required, the satellite operator must choose replacement facilities that most closely replicate those being displaced. In the case of a replacement satellite, because only C-band service to the CONUS is affected by the relocation process, a satellite operator should only be reimbursed if it deploys a satellite which operates solely in the upper portion of the C-band over CONUS. Furthermore, because eligibility for reimbursement depends on a showing that the replacement satellite is "truly required as a direct result of the transition of existing C-band services,"[9] the operator should be required to maintain the CONUS coverage of any satellite for which it sought reimbursement for its entire useful life, and should *not* be permitted, following the transition, to relocate the satellite to any alternative orbital slot that lacks CONUS coverage.

2. The *Cost Catalog* Estimates of C-Band Satellite Costs Are Too High

The Commission does "expect that procuring and launching new satellites may be reasonably necessary to complete the transition…[and] will support more intensive use of the 4.0-4.2 GHz band after the transition."[10] However, although the Commission acknowledges that some operators may need to launch additional satellites to complete the transition and provides ranges of estimated costs for the in-orbit delivery of such satellites, it nevertheless also states that its estimates are based upon standard C-band payloads only.[11]

The Commission provides that "[r]eimbursable space station operator costs are limited to the actual relocation costs, as long as they are not unreasonable[.]"[12] Because relocation to comparable facilities should reflect the limited mission of providing 200 megahertz of C-band

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[9] *Id.* at ¶ 200.

[10] *Id.* at ¶ 199.

[11] *See, e.g., Cost Catalog* at 2 ("low estimates are based upon satellite operator procurement of multiple, identical launch vehicles, where spacecraft are assumed to be standard C-band payloads"). Table II-B-1 to the *Cost Catalog* also notes that it estimates total costs for "C-Band satellites" delivered in-orbit.

[12] *Id*.

CONUS capacity only, the range of costs stated in the draft *Cost Catalog* for in-orbit delivery of C-band satellites is far too high.[13] The Commission developed its relocation cost estimates in the *C-band Order* based on an expectation of $160-$250 million per satellite, a range that was well supported in the record.[14]

There is no supportable basis for the upper end of the *Cost Catalog*'s proposed ranges and it would be plainly unreasonable to reimburse those amounts. Such disproportionately large relocation reimbursement payments could only be for satellites with large (and heavy) buses, with large arrays of transponders operating on multiple frequency bands over large, non-CONUS regions. Such payments, in effect, would improperly subsidize non-C-band satellite costs that are completely unrelated to the relocation process. Doing so would depress auction values for the associated flexible use terrestrial licenses, unduly advantage larger C-band incumbents, and distort competition. This result would be incompatible with the Commission's *C-band Order*, *Emerging Technologies* framework, and *Teledesic* precedent.

3. Cost Allocation Principles Cannot Address Cross-Subsidization

The complexities in allocating costs of a hybrid satellite among multiple frequencies, transponders, or regions make it tantamount to impossible for the Bureau or the Clearinghouse to adequately constrain operators from cross-subsidizing payloads. The Commission's only guidance states that operators "must reasonably allocate the incremental costs of such additional functionalities to [themselves]" but provides no guidance on how such allocation should occur.

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[13] *Cost Catalog* at 5 (Table II-B-1, showing a range of $120M-450M for a single-launched satellite and $240M-768M for tandem-launched satellites).

[14] Eutelsat placed in the record an estimate of about $150 million per C-band satellite based on publicly available data, *Legal White Paper* at 5, n.11. The *C-Band Order* also acknowledged the C-Band Alliance's similar per-satellite estimate of about $160 million, including the spacecraft, launcher, and ground equipment, as well as SES's separate estimate of $150-$250 million, *C-band Order* at ¶ 206.

To minimize the risk of such cross-subsidization, the Bureau should confirm that only satellites that operate solely with a C-band payload and within CONUS are eligible for reimbursement.

Hybrid satellites necessarily entail a range of higher costs, including design and construction, bus, transponder, and launch costs, more powerful maneuvering engines and larger fuel supplies, and more complicated and costly ground control operations. In the context of a contract to build such a satellite, there is no reasonable way to identify those incremental costs separately from the costs of a hypothetical C-band-only satellite that would serve the CONUS.

Importantly, incumbents' existing in-orbit C-band satellites will continue to operate after the transition and may serve markets outside of CONUS. It should not be permissible for operators to obtain substantial funding for new satellites to serve these other markets. Accordingly, the Commission should limit the reimbursement for construction and launch of new satellites to those which only permit C-band and CONUS coverage.

B. Lump-Sum Amounts for Earth Station Operators Should Be Set Adequately to Incentivize Rapid Relocation

Eutelsat has long advocated that the Commission should adequately accommodate the needs and concerns of earth station operators, especially independent C-band gateway operators, during this transition by providing them with reasonable opportunities to make their own choices and manage the implementation of their own relocation processes.[15] Thus, Eutelsat applauds the Commission in seeking comment in the *Cost Catalog* on lump-sum payments differentiated among multiple earth station categories.[16]

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[15] *See* Eutelsat, S.A., Notice of *Ex Parte* Communication, GN Docket No. 18-122 (Feb. 20, 2020) at 7; *see also* Letter from Carlos M. Nalda, for Eutelsat S.A., GN Docket No. 18-122 (filed Jan. 23, 2020); *and* Letter from Carlos M. Nalda, LMI Advisors, for Eutelsat S.A., GN Docket No. 18-122 (filed Jan. 30, 2020).

[16] *Notice* at 2; *see also C-band Order* at ¶ 203 (directing the Wireless Telecommunications Bureau to announce the lump sum amount available per incumbent earth station based on various classes of earth stations, including MVPDs and gateway sites, among others).

Lump-sum payments must be adequate to facilitate rapid decision-making by earth station operators and incentivize them to take on responsibilities without significant delay in a managed transition process. The Commission established the option for earth station operators to accept a lump-sum amount "based on the average, estimated costs" of relocating their earth stations.[17] The Commission further acknowledges that different types of earth stations should be compensated differently.[18]

Given this framework, Eutelsat agrees with the Commission that lump-sum payment categories should reflect the different types of earth stations, including differences in antenna size. Eutelsat also contends that such categories should be divided based on the application for which the earth station is used (*e.g.* end-user terminals versus gateway terminals). This breakdown better reflects fundamental differences in earth stations and the engineering required to relocate them (*i.e.*, a gateway requires significantly more spectrum than an end-user earth station).

Eutelsat submits that a lump-sum payment equal to twice (*i.e.*, 2x) the average cost of relocating an incumbent's earth stations would be appropriate to ensure earth station operators have the flexibility to make efficient decisions that better accommodate their needs. The Bureau must establish lump-sum amounts that are "*based on* the average, estimated costs,"[19] and thus may provide for a lump-sum payment greater than the average to incentivize lump sum election for earth station operators (including those whose relocation costs may be above the average).

The proposed lump-sum amount would ensure that unforeseen costs that may disrupt or delay transition can be covered in the payment. This premium also accounts for uncertainty in the average cost calculation and therefore mitigates the risk that earth station operators will be

[17] *Cost Catalog* at 13 (citing C-band order ¶ 202).

[18] *See id.* at 4-7 (listing costs for simple filtering, retuning, or repointing of earth stations, as well as costs specific to gateway uplink and downlink chains).

[19] *C-band Order* at ¶ 202 (emphasis added).

left with an amount too small to manage their transition effectively. In addition, the lump-sum payment multiple should be weighed against the costs savings and rapid, guaranteed relocation associated with earth station operators that opt to receive the lump sum payment. Thus, an appropriately sized lump-sum payment ultimately will help to ensure that the Commission's goal of an efficient and rapid transition is met.

C. The Cost Catalog Should Clarify the Basis for Potential Cost Allocations

For those relocation costs that are subject to allocation under the *C-band Order*, the Bureau should articulate clear cost allocation principles that ensure that only costs that are necessary to the relocation process are reimbursable, and that minimize gold-plating and cross-subsidization of other, unrelated aspects of satellite operator businesses, including services delivered outside of the CONUS or in other frequency bands. As noted above, the Commission has stated that incumbents are expected to "obtain the equipment that *most closely replaces their existing equipment* or…the targeted technology upgrades necessary for clearing the lower 300 megahertz, " The Commission further provides that "if an incumbent builds additional functionalities into replacement equipment that are not needed to facilitate the swift transition of the band, *it must reasonably allocate the incremental costs of such additional functionalities to itself and only seek reimbursement for the costs reasonably allocated to the needed relocation*.[20]

However, the eligibility and allocation principles that the Commission articulated in the *C-band Order* do not provide the necessary level of detail that satellite operators require to determine with certainty the extent to which costs they might incur will be deemed eligible. The *C-band Order* directs the Bureau to "make further determinations related to reimbursable costs, as necessary, throughout the transition process."[21] As part of its exercise of that authority, the

[20] *C-band Order* at ¶ 194 (emphasis added).

[21] *Id.* at ¶ 262.

Bureau should issue further and more granular guidance on how such potential cost allocations would be calculated. This guidance should specifically address which features or functions would indeed be eligible (and, conversely, ineligible) for reimbursement, and the precise methodology that would be used for making assessments in relation to cost reimbursement allocations for potential hybrid satellites.

The majority of the need for additional satellites will be transitory, occurring during a temporary, dual-illumination period during the transition.[22] Limiting eligibility to small, C-band-only satellites will minimize the cost of meeting that transitory need, while facilitating the rapid manufacture and launch of these satellites during the aggressive accelerated relocation timeline.

Requiring operators to prepare transition plans in the absence of such guidance will undermine the reliability of these plans, as they will necessarily rest on incomplete information and potentially erroneous assumptions about how these issues will ultimately be resolved. As such, Eutelsat submits that the Commission should make such guidance available no later than May 29, 2020. If the Bureau is unable to meet that timeline, then the transition plan deadline should be extended accordingly to enable operators to make informed election decisions and submit reasoned transition plans.

II. CONCLUSION

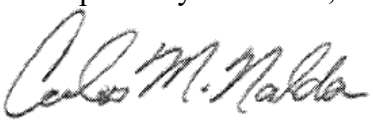
For the foregoing reasons, Eutelsat respectfully opposes allowing the cross-subsidization of new satellites with non-CONUS and non-C-band payloads. Allowing such cross-subsidization is neither consistent with Commission precedent and objectives nor sound public policy. In order for incumbent satellite operators to devise meaningful and considered transition

[22] *Id.* at ¶ 201.

plans, it is imperative for the Bureau to issue further guidance regarding reimbursable C-band satellite relocation costs and, to the extent necessary, more granular guidance on how potential cost allocations would be applied.

In addition, earth station operators seeking a lump-sum payment should be adequately incentivized to rapidly transition from the C-band and the Commission should capture and reflect the differences in earth station types and applications through such lump-sum payments.

Respectfully submitted,



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